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ABSTRACT

Three experiments in auditory selective attention form the basis of this investigation of cross-cultural differences among the ethnic groups of the Ibo and Yoruba adolescents of Nigeria. A sample of 200 16-year-olds were randomly drawn from four secondary schools. Yoruba adolescents showed superior performance in a task-involving the repetition of a message heard through one voice (female), while disregarding a different message played and heard through another voice; and in a task involving both the case where the accepted message led in time and where it logged in time in relation to the rejected message. In view of these findings, it is recommended that the curriculum formulation in Nigerian schools should be based on indigenous socio-cultural influences. (Author/BW)

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CULTURAL INFLUENCE ON SELECTIVE ATTENTION PROCESSES AMONG NIGERIAN ADOLESCENTS

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(Paper presented at the 7th International Conference on Personality Assessment held at the University of Minnesota, February 27 - 29, 1981)

A B S T R A C T

CULTURAL INFLUENCE ON SELECTIVE ATTENTION PROCESSES

AMONG NIGERIAN ADOLESCENTS

The present study is concerned with the cross-cultural differences in selective attention among the ethnic groups of the Ibo and Yoruba adolescents of Nigeria. The operational hypothesis that the Yoruba adolescents are more likely than the Ibos to possess audio-visual skill in selective attention processes were proposed. A group of two hundred, 16 year-old adolescents for this study were randomly drawn from four Secondary schools.

Three experiements in selective attention form the basis of this investigation. These experiements examine cross-cultural differences within the auditory split span, dichotic listening, and speech shadowing experimental modes of selective attention.

The Chi-square, and the analysis of variance were the statistical techniques employed, to ascertain the cultural differences. The results indicated that the hypothesis two and three reached the statistical significance at .001 level of confidence; but hypothesis one did not reach a statistically acceptable level of signifiance.

In view of these findings, the following implications were recommended.

1. The fostering of the right motivation in the learning of various Nigerian cultures and languages, thus providing stimulation for the growth of the selective attentional skills in those ethnic groups that the environment do not stimulate its growth.

2. The curriculum formulation in Nigerian Schools should be based on indigenous socio-cultural influences.

3. The government should foster the expansion of museums and art galleries, as means of certain pointers for future cross-cultural research.

CULTURAL INFLUENCE ON SELECTIVE ATTENTION PROCESSES AMONG NIGERIAN ADOLESCENTS

A. INTRODUCTION

Various researchers on cognitive cross-cultural studies in Africa have suggested cultural differences: Segall et al (1966); Jehoda (1966); Hudson (1960); Berry (1965; 1966); Dawson (1963a, 1967, a,b) and Cole et al (1971). These studies however, did not provide any specialized study using selective attention techniques as an instrument. Although in some of these studies: Segall et al (1966); Hudson (1960) point out that the direction of attention affect illusion responses within culture. It does mean that cultural variation is a useful means of studying selective attentional preferences between peoples of the world.

There has been constant interest during the past few decades on selective attention by various researchers, Broadbent (1958); Cherry (1953; Moray (1959) and Treisman (1964 a,b). In general these did not deal specifically on cross-cultural studies.

This experiment on split-span selective attention as originally described by Broadbent (1958) consists of the presentation of three pairs of digits or other signals. These items are presented rapidly in pair so that all pairs are presented in three to five seconds. These signals are presented in such a way that the listener hears the two members of each pair as nearly simultaneously as possible, but no response is required until all three pairs of stimuli have been presented. The subjects either had to repeat back all the

digits presented or just those comprising one digit, or item. This is done either in a specified order or by free-recall. An auditory item may be presented monaurally or dichotically or even paired with a visual item (Broadbent and Gregory 1961, 1965). Functional separation of items may be effected by manipulating the general frequency of the voices or location. For example, a male and a female voice make two messages separable as well as the selective filtering out of treble frequencies from the other.

The technique of shadowing experience was introduced by Cherry (1953) and consists in asking a listener to repeat a continuous prose message while he receives it. His observation was that when a listener shadows a message presented to one ear, he can afterwards say of the rejected message only such things as whether a man or a woman's voice, but cannot report any of its content, or what language it was spoken in. It seemed as though shadowing was an extra-ordinary powerful way of looking at listener's attention on to the required message. Moray (1959) confirmed Cherry's finding with regard to the efficiency of the block for the content of the rejected message, but also drew attention to the first example of way to break through the block. He also found that if he rejected message, consisted of a set of seven words repeated thirty five times, during the shadowing of the accepted message, no trace of retention of the list could be found using a recognition test administered twenty seconds after the end of shadowing.

Further, one of Cherry's results showed that when the two messages were identical, subjects noticed the identity, as long as the lag between the two was not too great. This result was confirmed by Anne Treisman (1964) who found that the identity was noted at a longer delay when the shadowed message was leading (4.3 seconds) than when it was lagging (1.3 seconds). Since Treisman found that the identity was noticed just as readily when one message was in a male and the other a female voice, it may well be that the comparison was not based on a simple sensory auditory memory trace, but in a deeper auditory perceptual processing. Subjectively, most listeners agreed that they were not aware of the content of the rejected message. Moray (1959) failed to alter the listener's performance by giving a set to receive a certain class of signals. Relatively short passages were used for shadowing, and they included four digits embedded in the message, and four digits embedded in the rejected message. He did find that a person's own name could attract his attention.

It has been argued by Cole et al (1971) that comparisons between and within societies are most conducive to fuller understanding of psychological processes. On the same train of thought, the anthropologists point out that:

> The reasoning and thinking processes of different peoples in different cultures do not differ..... just their values, beliefs, and ways of classification differ. (quoted in Cole et al 1971)

In this study, the identification of those specific artistic and socio-cultural practices within the Yoruba environment, may likely aid in the development of selective

attention skills within the auditory and visual modality processes, better than the Ibo environment. In other words, if the Yoruba environment provides many opportunities in acquiring and classifying perceived objects better than other environments, this same environment may likely produce individuals who may be able to solve selective attention taks, within the auditory and visual modality processes.

Theorectically, the argument is that the traditional hierarchy, language, poems, songs, music and socialization practices among the Yorubas may lead to their development of different selective attention skills, as compared with the Ibo ethnic group. These differences may be predicated from the operational analysis of the following specific artistic and cultural practices.

(a) Traditional Hierarchy:

The Ibo model of viewing their social stratification is based on wealth. It does not matter what occupations a person engages in. With this ideological rather than the traditional model, they distinguish between the poor, the moderately prosperous, and the rich. The stress wealth and prestige in status placement, a stress that makes individual achievement primary and defines social mobility in wealth-prestige terms. The contrast is the case with the Yoruba model. The claim to Oba's (king's) authority or precedence among the kings does not depend on power or wealth or extent of territory but solely on the natural order of the birth of the original ancestors as inherited by their descendants. For instance, when early Yoruba society took shape in Western Nigeria a thousand years

ago, people settled in farming communities in the forests. As Yoruba towns grew larger and more prosperous in this fertile land, each of them developed parallel and similar institutions under their local linage leaders. These institutions were organised on the concept of extended family (Ebi). They projected the state as the replica of a family. Yoruba ideology is supposed to be a family of spiritual beings, gods and lesser gods and ancestors, under the supreme and immemorable "God" (Olodumare). They saw this as being repeated on earth in the "Founding model" at Ife, and then in other Yoruba towns.

From this model flowed all legitimate authority. At the head of these communities stood the Oni of Ife, with the Obas of all the other towns ranked in order of seniority below him, according to the supposed foundation dates of their communities. Within this hierarchy, all Yoruba could find a place. It is obvious from the great longevity of these systems that the place was generally acceptable. Conformity is usually demanded from individuals who have deviated psychologically or socially from the accepted forms of behaviour laid down by the Oba, who is the father of the state, while the subjects are his inherited children. In other words, the government is a form of constitutional monarchy. In hierarchical order, only the king may be praised with double gongs, and only officials who have reached the rank of district head or its equivalent, with wooden horns. The Ibo traditional government is a direct democracy in which leadership is achieved on a competitive basis. The village government gives much latitude to the young people with wealth.

(b) Language, Poems, Songs and Music:

Among the Yoruba, literature, music, poems and songs are interwoven. The language is different from that of Ibo and is highly tonal, practically every instrument that has a capacity for pitch differentiation is used as a talking instrument. The most common Yoruba talking instrument is the hour-glass tension drum which has a pitch range of several notes, and is able to re-produce both the level and the gliding tones of Yoruba speech. Other Yoruba talking instruments include, Flutes (fere), and hand piano (agidigbo). The Ibo too make use of their tone language in music and talking instruments like the slit-drum (ikoro), but cannot surpass the skillful devices which the Yorubas use to compel people to perceive communication. For instance, a type of roving singer with a "talking" drum finds a site from which the man whose praise he will sing and who is expected to provide suitable reward, is physically and socially helpless to withdraw. He may begin singing early in the morning before people have left their homes or late at night when they have returned. He may function in a market place since houses of traders and prominent people are close by and the site provides a good range for his druming and voice. In the song the indicates to everyone within earshot just who it is that he is addressing by calling out the person's name. After chanting praises for a while, he begins to demand gifts. The amount of gift is publicly announced. If what he receives he considers adequate, he repeats briefly some of the praise and recommends the donor to God. But if he thinks it inadequate

he gradually changes the pattern of his singing to a staccato from which is indicated his impatience and dissatisfaction. There seems to be no way for the victim to avoid the praise, or, unless he can endure the public shame, the presentation of the gift. Such a technique of selective non-verbal communication is used among a few beggars in Iboland, without selectively choosing a particular victim.

(c) Socialization Practices:

The next cultural aid which is considered, is the system of socialization practices used by members of a particular society. In dressing cultural differences abound. For instance although the Ibo discovered early and used leaves, barks of trees, dyes in the making of textile materials, yet nothing emerged as the Ibo national dress, because the consciousness of belonging to the Ibo nation had not been aroused and made manifest through new artifacts such as a common mode of dress. While the Yoruba wear their distinct robes and wrappers. In ceremonial traditional dance, they throw their energy into their cloth, with a rhythmic display of art objects and constumes. Yoruba traditional music has a dramatic orientation which is realised in dramatic form in re-enactment ceremonies, religious ritual, celebrations pertaining to the life-cycle and other social events.

Masquerades, important agents of social control in Yoruba land, are powerful links with the world of spirits. The costumes of masquerades are among the richest and most varied of all. All the components of dress, all the known arts of decoration, all the materials normally utilized in ordinary

and special dress, are at the proper disposal of the specialists who create these costumes. The result may be simple, colourful, grotesque, or satrical. The older masks and head-dresses, carved pieces of wood, and less frequently ivory and metal, briliantly painted and decorated are among the best of Yoruba dress and sculpture. They may represent the human face, or the heads of animals or fishes, or they may combine all of these. In all cases, a deliberate aesthetic effect is aimed at, since there is a will to please the ancestors, some supernatural force, or simply the crowd.

The traditional Ibo attire of the title-holder or the chief is the normal big cloth indicative of age, but the colour is always white in most cases, a symbol of purity of thought and action that is suyposed to accompany his title. Thus, a contrast with the Yoruba traditional ruler who wear silken (sanyan) multi-coloured princely robes. The influence of European fashion was most conspicuous among the Ibo than the Yoruba because the Ibo never had a specific dress, and therefore added to the greatest single threat to whatever traditional dress they have evolved.

Christianity in Iboland had the greatest impact on status based on age-grades. Age-grades further gave way to status based on membership of a small elitist group composed of civil servants, doctors, lawyers, teachers and clergymen of the Christian Church, whose dress was conspicuously European. The missionaries prescribed the mode of dressing for their court messengers, clerks and office workers. Singlets became popular, and cheap but well manufactured cotton fabrics from the major textile mills of Britain were abundant. Garments, make-ups, hats

bags, shoes, singlets and other accessories were the prestigious dress. It became synonymous with progress and civilization in Iboland.

The educated Ibo and the Ibo from the northern part of Iboland stuck firmly to the European dress and their mood of behaviour in general. Ibo women failed to develop any distinctive patterns of dressing but concentrated their efforts in using various local materials and cosmetics to beautify their skins, and make up their bodies with beads, ivory, coral beads, ear-rings and other materials. The coming of Europeans changed dramatically this state of affairs. Like their menfolk they began changing fashion with the general trends in Europe. Traditional dress in Iboland was associated with backwardness and uncouthness.

To sum up, it is not difficult to see how the practice of the mentioned artistic variables, could perhaps aid in the development of selective attention. It must be emphasised that the artistic elements are the specific variables that led to the prediction of group differences within the auditory selective attention skills. These artistic elements are thought to be operating through the use and development of musical instruments, songs, drama, coloured costumed dress, language, cultural traditional hierarchy, socialization practices and the embroderic mosaic colour designs as delineated above.

The present study was designed to test the cross-cultural differences among the ethnic groups of Ibo and Yoruba adolescents of Nigeria in auditory split-span, dischotic listening, and speech shadowing modes of selective attention.

Three working hypotheses are formulated:-

1. That Yoruba adolescents will be more likely than their Ibo counterparts to show superior performance in selective attention in a task involving auditory discrimination of digits alternated with letters. This hypothesis is based on a study of Broadbent and Gregory (1961, 1965) and Uba (1980).

2. Compared with Ibo adolescents, the Yoruba will be more likely to show superior performance in auditory selective attention in a task involving the repetition of a message heard through one voice (female), while disregarding a different message played and heard another voice (male). This hypothesis is based on the pilot research by Uba (1980) and a study by Cherry (1953).

3. It is more likely that the Ibo adolescents will show an inferior performance than the Yoruba in a task involving both the case where the accepted message led in time and where it lagged in time in relation to the rejected message in auditory selective attention. This hypothesis is based on the study of Treisman (1964) and on the pilot study by Uba (1971).

B. METHOD

1. Subjects:

Ss for each experiment were randomly drawn from a group of 200, 16-year-old adolescent students from four secondary schools, two from Imo State to represent Ibo, and two from Ondo State to represent Yoruba. Three independent variables from the data matrix, that is, sex, socio-economic, and urbanization background were chosen to check their effects on the dependent variables.

The independent variable for sex has two levels namely; male and female. Socio-economic status has five levels namely: professional; highly skilled; semi-skilled; and unskilled. Urbanization background has five levels namely: rural; peasant-urban (population of less than 5,000); pseudo-urban (population of 5,000); urban industrial pre-literate; and urban industrial literate (population over 5,000). Socio-economic and demographic ratings were collected from each S, and were based on father's occupation.

Experiment 1: Auditory Split-span Dichotic Experiment.

Apparatus and Materials: The E recorded the experimental tapes employed in this study. Lists of digits were randomly mixed with letters. The digits were taken from the random sero to nine number letters subject to the restriction that no digit occured more than once in each list. The letters were selected at random from the first ten letters of the alphabet, subject also to the restriction that no letter occurred more than one in each list. Both letters and digits were randomly mixed, so that the letters were not easily identified. Both were alternatively presented and spoken in a male and female voice. The identification of one of the items (letters) had to be recalled and written down on the sheets of papers provided for the task. The number of letters and digits in each item ranged from one to eleven, according to the order of difficulties. The auditory warning were pure tones of about 1,000 HZ; with the minimum sound pressured level of about 80db. The rom was quiet though not sound proofed. It measured approximately 4.30m x 3.20m. The Ss sat on chairs with fixed backrests in suech a way that their heads were erect.

Task and Procedure: At the beginning of the present group experiment, Ss were informed of the conditions of presentation. Many knew the E before, and once they got used to the atmosphere of the test situation, they felt perfectly at ease. The instructions were read out to them in a group. Each S received a copy of this instruction. Considerable efforts were made to ensure that the Ss understood the task. The practice trial presented under the experimental condition were run first. They consisted of three trials. Presentation was at the rate of one list every ten seconds. A warning signal "Ready" preceeded each presentation . At this practice trial Ss recorded their responses in writing and were informed by the E what the answers had been. Brief rest periods were given after the practice trial, prior to the beginning of the main tasks. Scoring was in terms of total correct letter items. There were thirty lists of digits alternated with letters, with one mark for lists totally correct in the order of presentation according to the author's scoring method.

Results: In scoring the results, any list of items totally correct which had actually been presented was scored correct. The number of correct responses for each group were subjected to the analysis of variance. The hypothesis that the Yoruba adolescents tendered to show a superior performance in selective attention on a task involving auditory discrimination of digits alternated with letters was not substantiated. The results show that the Yoruba adolescents did not tend to show a superior performance in selective attention on a task involving auditory discrimination of digits alternated with letters. The difference

did not reach a statistically acceptable level of significance (F (1) = 1.746, p .185). Further analysis revealed that the main effects of sex, urban and socio-economic variables w were found to be non-significant (F (1) - .965, p .999 for sex; F (3) = 1.144, p .332 for urban; and F (3) = 1.674, p .172 for socio-economic). Thus, this hypothesis was not clearly supported by the findings.

Experiment 2: Auditory Speech Shadowing Experiment

Apparatus and Materials: The stimuli were two different continuous prose message, about 100 words in each. These messages were recorded and screened to exclude words with strong emotional connotations. They were derived from the novels written by a famour Nigerian novelist - Chinua Achebe (1966). Both messages were spoken in a female and a male voices on the same track at a pitch of 100HZ and were recorded in different voices. To be shadowed, prose message was subdivided into ten phrases. Each phrase was presented at the rate of one every ten seconds. The prose speakers (male and female) were chosen because they were good readers with articulate voice. However, care was taken to avoid unintellicible accent to both groups.

The message were played on a Grunding 200 Tape Recorder at an intensity level of about 80db. In the classroom, this tape recorder was positioned to occupy a particular sound-deadened position along the corner. Though the room was not sound-proofed nevertheless the experimenter made sure it was extremely quiet to comply with the nature of this experiment. This room measured approximately 4.30m x 3.20m. Each subject was tested individually. He or she sat on a chair with fixed back-rest facing the experiment, who made sure that the subject's head was comfortable and erect.

Task and Procedure: The subject's task was to shadow as rapidly and as accurately as possible the stimulus message presented. Presentation was such that when shadowing, the subject was to disregard the message spoken in a male voice, and to shadow the message spoken in a female voice. At the initial stage, the subject was instructed as to the nature of the task, and was given practice exercise for ten minutes, on a prose message similar to that which will appear in the experimental session. The instruction was read to the whole group, prior to the individual tasks. Each student received a copy of this instruction inserted in his or her booklet to make sure he or she knew what was expected tof him or her.

Prior to the main task, each student was given a brief rest period after the practice exercise. One minute rest interval was inserted, between the

shadowing and the short interrogation. No feedback concerning the quality of his performance was provided during the course of the experiment. Each phrase within the shadowing message, was scored as an item. Scoring was in terms of a total correct shadowing of each phrase. In scoring the results, the number of correct phrases for shadowing (ranged from zero to ten) was used as the basic datum.

Results: In the results of hypothesis 2, it was considered that through cultural practice, the Yoruba adolescents would probably show a better performance in auditory selective attention in a task involving the repetition of a message heard in one voice, while disregarding a different distracting message played in the other voice.

(Table I about here)

It is apparent from the results in Table I that this possibility that had been anticipated reached a statistical level of significance (F (1) = 10.154, $P < .002$). Analysis of variance computation was carried out as illustrated in Table I.

The main effects of sex, urban, and socio-economic were found to be non-significant by analysis of variance (F (1)=.965, $P > .999$ for sex; F (3) = 1.271, $P > .285$ for urban and F (3)=.261, $P > .285$ for urban and F (3) = .261, $P > .999$ for socio-economic).

Experiment 3: Auditory Listening Experiment.

Apparatus and Materials: Each subject was tested individually in a quiet sound deadened corner of the classroom. He or she was seated approximately 20 ins. from the tape recorder and the experiment.

The stimulus presentation of prose message sequence was programmed on a 200 Grunding tape recorder at an intensity level of about 70 - 80 db. The identical messages were recorded on the same tract at a pitch of 100HZ in a male and female voice respectively, displayed in time. This prose message was about 100 words long, derived from Chinua Achebe's (1966) Novel.

Task and Procedure: At the beginning of the investigator made sure that the subjects were given sufficient group instruction as to the nature of task facing them. Individual subjects were requested to read the instruction from the booklet if need be.

A similar prose message to that which would appear in the experimental session was presented for ten minutes for practice exercise. Questions were answered and corrections made on the blackboard, and rubbed out immediately.

The subject's task was to shadow as rapidly and as accurately as possible the stimulus prose message in a female voice. The investigator presented two continuous identical dichotic prose messages. One to be shadowed and one to be ignored. Five target items such as names and familiar words were inserted into each of the messages.

Given that the subject did not attach any importance to the target items, he or she was intergrated about them after presentation. Questions were also asked about the similarities of the two prose messages. One minute rest period was added between the shadowing and the short interrogation that followed it. No feed-back concerning his or her task performance was given during the course of the experiment. Scoring was in terms of subject's ability to identify the similarity or the identity of the two messages whether in lagging or leading sequences.

Results: In scoring the results, the range from zero (no correct identification of the two messages) to 10 (correct identification) scores were used. The performance of the two groups was then compared by means of a 2 X 2 chisquare analysis corrected for continuity. When cross-cultural differences were compared by a chi-square test in Expt. 3, the Ibo adolescents showed less superior performance than the Yoruba in a task involving both the case where the accepting message led in time and where it lagged in time over the rejected message in auditory selective attention; (X^2 (1)=15.72, $P < .001$). The result was highly significant in the expected direction. Table 2 reveals the result.

(Table 2 about here)

The results of the questionnaire administered immediately after the shadowing in this Experiment 3, revealed that approximately 40% of the whole sample were aware of the occurence of some of the five target words inserted into the unattended message.

C. DISCUSSION

The predictions of superior performance by the Yoruba group, relative to the Ibo group, in three selective attention tasks were confirmed in two experimental tasks. A partial explanation for this findings may reflect to the extent to which the Ibo adolescents have been less exposed to the experiences that promote the growth of these cognitive processes in selective attention skills.

They seem to demonstrate as Piaget (1958) has pointed out that the realisation of an individual's or group's potential ability to perform logical operations "can be accelerated or retarded as a function of cultural and educational condition". Perhaps another reason may be the sort of motivation, attitude, and other factors they brought into the experimental task situations, where in terms of their social experience, these tasks have no m meaning for them. Such a situation has been called "functional fixedness" - which "refers to a situation in which the subject has been so "fixed" in his perception of an object that he is unable to perceive new or unusual uses for it." (Schu..s, 1963). This does not however, refer to lack of cognitive process among the Ibos.

One of the aims of cross-cultural studies is to find out the extent to which psychological theories developed in the West apply to non-Western cultures, especially to Africans. It is interesting to note that in these experiments, the subjects' performance resembled several previously tested Western subjects

in the same type of experiments. For instance, in Experiment 1, when measuring in terms of letters of lists totally correct, the alternating recall showed about 25% (Broadbent, 1954). The subjects responded in a grouped succession rather than in simultaneous items as Savin's (1967).

In Experiments 2 and 3, the subjects could say of the unattended message, whether or not they were words or a speech (Cherry, 1953). They could not retain the words after 20 seconds, the exercise of shadowing ended (Moray, 1959; Norman, 1969a). Finally, most of these subjects could shadow the voice of one sex and ignore that of the opposite sex (Treisman, 1964a, b).

Bruner (1966) views cognitive growth as the process of internalising ways of acting, imaging, and symbolising from the culture. For instance, such cultural materials like music, drums, coloured patterns of artistically decorated clothes may have conveyed selective significant meaning to the Yoruba adolescents, thus preparing them in advance for the demands that may be upon them in the classroom learning situation of similar coding such as the indentification of the two messages.

Perhaps the advantage the Yoruba adolescents have in theoretical terms, is the ability to discriminate the language of the "talking drums," whose rhythms and tone directions are subject to elaborated selective attention. The talking drums speak to no one who has not practised the coding system and who is not acquainted with the language of the society, as these adolescents learnt early in life. This means that their knowledge of subtleties and vigilance over confusion in the language of the talking drums in this fied of selective attention, are well developed,

particularly more so in boys then in girls, for girls do not hit the drums. Herskovits (1951) correctly pointed out that "art is a part of life, not separated from it".

The interaction of the environmental variables with this dependent variable provide some support that in an environment, like that of the Yoruba, where the girots play their harp lutes, singing stories about history that is no longer within living memory, children as well as the adolescents usually listen to their stories. The authentic story-teller dances, sing, moans, groans, howls and shrieks creating an exciting and memorable experience for these adolescents. By stimulating the imagination and broadening the senses the story-teller trains their eyes to observe, their ears to listen and shows, their hands to builds, and their bodies to move, thus stirring up the initial process of the creative experience which motivates the adolescents to read, to write and to study. In other words, the positive findings of two experiments suggest that the selective attention techniques of shadowing is a childhood early experience of adolescent in Yorubaland.

In view of these finds, the following implications were recommended.

1. The fostering of the right motivation in the learning of various Nigerian cultures and languages, thus providing stimulation for the growth of the selective attentional skills in those ethnic groups that the environment do not stimulate its growth.

2. The curriculum formulation in Nigerian Schools should be based on indigenous socio-cultural influences.

3. The government should foster the expansion of museums and art galleries, as means of certain pointers for future cross-cultural research.

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Table I

Analysis of Variance Showing the Significant and Non-Significant Differences in Expt. 2 in Number of Correct Responses in Selective Attention in a Task Involving the Auditory Shadowing of Messages

Source of Variation	Sum of Square	df	Mean Square	F	Significance F
Main Effects	24.758	8	3.095	1.907	.061
Sex	1.566	1	1.566	.965	.999
State	16.807	1	16.807	10.354	.002*
Urban	6.189	3	2.063	1.271	.285
SES	1.271	3	.424	.261	.999

*P Significant at .005

Table 2

Comparison of the Total Number of the Correct Identification of the Two Messages in Auditory Selective Attention in Expt. 3 Between the Ibo Yoruba Adolescents

States	No. of Correct Identification.	No. of In-correct Identification	df	X^2	P
Yoruba	30	70	1	15.72	.001*
Ibo	8	92			
Total N = 200	38	162			

*P Significant at .001